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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,260	01/23/2002	Ichiro Yokozeki	218303US2	2001

22850 7590 11/20/2003

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EXAMINER	
LEUNG, PHILIP H	

ART UNIT	PAPER NUMBER
3742	7

DATE MAILED: 11/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Applicati n No.	Applicant(s)	
	10/052,260	YOKOZEKI ET AL.	
	Examin r	Art Unit	
	Philip H Leung	3742	

-- The MAILING DATE of this communication app ars on the cover she t with the correspond nce addr ss --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) *6-16,18 and 20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,17 and 19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *1-23-2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Applicant's election with traverse of species of Figure 9, **claims 1-5, 17 and 19** in Paper No. 6 is acknowledged. The traversal is on the ground(s) that there is no serious burden on the Examiner. This is not found persuasive because the application which includes 11 embodiments certainly requires a lot more time for both searching and examining. Most importantly, upon an allowance of a generic claim, other species will be readily allowed along with the generic claim(s) and searching time will be saved. Furthermore, as pointed out in the election requirement, unless applicants traverse on the ground that the species are not patentably distinct, such as by submitting evidence or identifying such evidence now of record showing the species to be obvious variants or clearly admitting on the record that this is the case, the election requirement is proper and will not be withdrawn.

The requirement is still deemed proper and is therefore made FINAL.

The drawings filed 1-23-02 are acceptable.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

1, 2, 5

Claims ~~1-3~~, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Matsushita* (JP 59-33787) (cited by the applicants), in view of *Jackson et al* (US 2,181,274).

As described by the applicants in the specification on page 2, line 8 - page 3, line 3; it appears that *Matsushita* discloses an image fixing device including a high frequency induction heating roller (in Figures 1-3) which is comprised of a cylindrical roller body composed of electrically conductive material, a cylindrical bobbin located inside the cylindrical roller body in a concentric relationship, and an induction coil wound around an outer circumferential periphery of the bobbin in a spiral relationship to induce induction current in the roller body to compel it to be heated up. With such a structure of *Matsushita*, the cylindrical roller body serves as a secondary coil of a closed circuit and the induction coil serves as a primary coil, with the primary and secondary coils being coupled in a transformer relationship to cause secondary voltage to be induced in the secondary coil of the cylindrical roller body. The presence of flow of secondary electric current through the closed circuit of the secondary coil responsive to the secondary voltage compels the cylindrical roller body to be heated up, i.e. in a so-called secondary side resistance heating technology. With this technology, the presence of stronger magnetic coupling than that achieved in the heating technology using the eddy-current loss increases a stationary efficiency while enabling the whole of the heating roller to be heated up, resulting in an advantage wherein a fixing device becomes more simple in structure. Therefore it can be seen that Matsushita includes every feature and element of the claimed induction heating roller of an image fixing device except that it does not show the relation between the secondary resistance and the secondary reactance as being equal. *Jackson* (Figures 1 and 2 and page 1, line 43 - page 2, line 60) shows an induction heater having a secondary coil (sheath 2) and a primary induction heating coil 4 and it teaches that the resistance of the secondary sheath 2 should be equal to the reactance for maximum efficiency (col. 2, lines 3-12). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify *Matsushita* to design the

secondary coil so that its resistance and reactance are substantially equal in order to maximize the electrical efficiency for better heating result, in view of the teaching of *Jackson*.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Matsushita* (JP 59-33787) (cited by the applicants), in view of *Jackson et al* (US 2,181,274), as applied to claims 1-3, 17 and 19 above, and further in view of *Hashimoto* (JP 54-140241) or *Ishida* (US 6,292,647).

Matsushita combined with *Jackson* discloses the claimed invention except for the showing of the detail of the power supply device. *Hashimoto* shows an induction heating system using a plurality of induction heating coils (1-1 to 1-7) to include a capacitor (2-1 to 2-7) connected in parallel with each heating coil to adjust the power factor of the induction heating system (see Figure 1 and the English abstract). *Ishida* also shows that it is well known in the art of induction image fixing devices to use a plurality of induction heating coils (34a, 34b, 35a, 35b) around the heating roller 32 and capacitors (43-1) connected in parallel with the coils to control the resonant frequency of the heating system to vary the heating power (see Figures 1-4 and col. 6, line 49 - col. 10, line 18). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify *Matsushita* to use a plurality of induction heating coils each with a parallel capacitor to control the resonant frequency and to adjust the heating power factor for better heating efficiency and result, in view of the teaching of *Hashimoto* or *Ishida*.

The prior art made of record below is considered pertinent to applicant's disclosure:

Panecki et al (US 4,908,489) and *Yokoyama et al* (US 6,255,632) are further cited to show induction heating devices with various features as claimed.

Effective May 1, 2003, the address for mail to the USPTO is:

Commissioner for Patents

PO Box 1450

Alexandria, VA 22313-1450

Any inquiry concerning any communication from the examiner should be directed to Examiner Leung whose telephone number is (703) 308-1710. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teresa Walberg, can be reached on (703) 308-1327. The fax phone number for this Group is (703) 872-9302.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

PHILIP H. LEUNG
PRIMARY EXAMINER
ART UNIT 3742

P.Leung/pl
11-14-03